HUMAN FACTORS, 1980, 22(6), 761—767

HUMAN FACTORS—INDEX TO VOLUME 22

TABLE OF CONTENTS

Human Factors Which Have Helped Japanese Industrialization, *Masamitsu Oshima, Yoshio Hayashi, and Kageyu Noro* 3
Systems-Ergonomic Approaches to Design and Operation of Today's Railroads, *Yuji Iiyama* 15
A Vector Model Analysis of Individual Differences in Sensory Measurement of Surface Roughness, *Yukio Inukai, Sachiko Saito, and Ikuo Mishima* 25
Judgment Attitude of Operator Derived from Decision Rule, *Takeshi Kurabayashi* 37
Determination of Counting Time in Visual Inspection, *Kageyu Noro* 43
Identifying Ability Requirements by Decision Flow Diagrams, *Sharyn M. Mallamad, Jerrold M. Levine, and Edwin A. Fleishman* 57
Promoting Increased Use of Ear Protectors in Noise Through Information Feedback, *Dov Zohar, Alexander Cohen, and Naomi Azar* 69
Transfer of Landing Skill after Training with Supplementary Visual Cues, *Gavan Lintern* 81
Searching for Traffic Signals while Engaged in Compensatory Tracking, *Merrill Noble and Andries F. Sanders* 89
Headlight Glare Resistance and Driver Age, *Nathaniel H. Pulling, Ernst Wolf, Samuel P. Sturgis, Donald R. Vaillancourt, and James J. Dolliver* 103
Time and Error Measures of Human Performance: A Note on Bradley's Optimal-Pessimal Paradox, *Jerry M. Childs* 113
Parametric Assumptions of Some "Nonparametric" Measures of Sensory Efficiency, *John D. Caldeira* 119
Military Research on Performance Criteria: A Change of Emphasis, *J. E. Uhlaner and Arthur J. Drucker* 131
A Constrained Maximization Extension to Incremental Transfer Effectiveness, or, How To Mix Your Training Technologies, *George Carter and Stanley Trollip* 141
The Development and Validation of an Analytical Training Program for Medical Suturing, *Gavriel Salvendy and John Pilitsis* 153
Anatomical Frames of Reference and Biomechanics, *Herbert M. Reynolds and Robert P. Hubbard* 171
Relative Stresses of Wheelchair Activity, *Roger M. Glaser, Stephen A. Barr, Lloyd L. Laubach, Michael N. Sawka, and Agaram G. Suryaprasad* 177
Effects of Aircraft Noise on an Intelligibility Task, *Malcolm D. Arnoult and James W. Voorhees* 183
Ocular Dominance and Field of View in Monocular and Binocular Optical Systems, *Joseph E. Swistak and John A. Allen* 189
An Evaluation of Blink Inspection, *J. G. Liuzzo and C. G. Drury* 201
The Event-Related Brain Potential as an Index of Display-Monitoring Workload, *Jack B. Isreal, Christopher D. Wickens, Gregory L. Chesney, and Emanuel Donchin* 211
A Test of Fitts' Law with Moving Targets, *Richard J. Jagacinski, Daniel W. Repperger, Sharon L. Ward, and Martin S. Moran* 225
Children's Estimates of Vehicle Approach Times, *Errol R. Hoffmann, Anthony Payne, and Stephen Prescott* 235

Short-Term Retention of Traffic Turn Restriction Signs, *Errol R. Hoffmann and Wendy A. MacDonald* 241
Review, Evaluation, and Comparison of Models for Predicting Lifting Capacity, *M. M. Ayoub, Anil Mital, Shihab S. Asfour, and N. J. Bethea* 257
Development of Strength and Capacity Norms for Manual Materials Handling Activities: The State of the Art, *M. M. Ayoub, Anil Mital, Gary M. Bakken, Shihab S. Asfour, and N. J. Bethea* 271
Modeling of Isometric Strength and Lifting Capacity, *Anil Mital and M. M. Ayoub* 285
A Design Tool for Estimating Passenger Ride Discomfort Within Complex Ride Environments, *Jack D. Leatherwood, Thomas K. Dempsey, and Sherman A. Clevenson* 291
Sleep Envelopes and Sleeper Berth Requirements, *Mark S. Sanders* 313
Response Time Effects of Alerting Tone and Semantic Context for Synthesized Voice Cockpit Warnings, *Carol A. Simpson and Douglas H. Williams* 319
The Range and Consistency of Individual Differences in Continuous Work, *Ben B. Morgan, Jr., Peter S. Winne, and Jean Dugan* 331
Influence of Noise Characteristics on Behavioral Aftereffects, *Lynn Percival and Michel Loeb* 341
The Positioning of Type on Maps: The Effect of Surrounding Material on Word Recognition Time, *Liza Noyes* 353
Effect of Prior Knowledge of Signal Probabilities on Vigilance Performance at a Two-Signal Task, *Angus Craig* 361
An Investigation of Varying Amounts of Component-Task Practice on Dual-Task Performance, *Angela M. Rieck, George D. Ogden, and Nancy S. Anderson* 373
A Method To Evaluate Human Factors/Ergonomics Design Variables of Distress Signals, *William S. Marras and K. H. E. Kroemer* 389
Changes in Driver Steering Control with Learning, *Alison Smiley, Lloyd Reid, and Morris Fraser* 401
Direct Looks and Control Location in Automobiles, *Ronald R. Mourant, Michael Herman, and Effat Moussa-Hamouda* 417
The Influence of Oncoming Vehicles on Automobile Lateral Position, *Thomas J. Triggs* . 427
Binocular Disparity and Head-Up Displays, *Christopher P. Gibson* 435
Laboratory Performance During Acute Alcohol Intoxication and Hangover, *W. E. Collins and W. D. Chiles* 445
On the Legibility of Segmented Numerals, *Floris L. Van Nes and Herman Bouma* 463
What Criteria Exist for Determining How Much Load Can Be Lifted Safely?, *Arun Garg and M. M. Ayoub* 475
Container Characteristics and Maximum Acceptable Weight of Lift, *Arun Garg and U. Saxena* 487
Predictor Operator in Pursuit and Compensatory Tracking, *Robert J. Jaeger, Gyan C. Agarwal, and Gerald L. Gottlieb* 497
Midair Collisions: The Accidents, the Systems, and the Realpolitik, *Earl L. Wiener* 521
Human Error in ATC System Operations, *James W. Danaher* 535
The Measurement of the Air Traffic Controller, *V. David Hopkin* 547
An Information-Processing Interpretation of Air Traffic Control Stress, *Jay M. Finkelman and Carl Kirschner* 561
Some Human Factors Aspects of Computer-Aiding Concepts for Air Traffic Controllers, *David Whitfield, Robert G. Ball, and Geoffrey Ord* 569
Controller Evaluation of a Touch Input Traffic Data System: An "Indelicate" Experiment, *R. B. Stammers and J. M. Bird* 581

Evaluation of the Potential Format and Content of a Cockpit Display of Traffic Information, *Sandra G. Hart and Les L. Loomis* 591
Perception of Horizontal Aircraft Separation on a Cockpit Display of Traffic Information, *Everett A. Palmer, Sharon J. Jago, Daniel L. Baty, and Sharon L. O'Connor* 605
Air Traffic Control Using a Microwave Landing System, *Gary Gershzohn* 621
Separation Discrimination in a Simulated Air Traffic Control Display, *Paul Stager and Trevor G. Paine* 631
Air Traffic Control Problems: A Pilot's View, *Frank D. Fowler* 645
Bilingual Air Traffic Control in Canada, *Paul Stager, Peter Proulx, Bryan Walsh, and Tom Fudakowski* 655
Cockpit Displayed Traffic Information and Distributed Management in Air Traffic Control, *John G. Kreifeldt* 671
Summarizing Military Information: An Application of Schema Theory, *Ralph E. Geiselman and Michael G. Samet* 693
Predicting Search Performance for Multiple Targets, *T. Morawski, C. G. Drury, and M. H. Karwan* 707
On Difficulties in Localizing Ambulance Sirens, *Terry Caelli and David Porter* 721
Visual Detection of Driving While Intoxicated, *Douglas H. Harris* 727
Review of Relationships Between Steering Wheel Reversal Rate and Driving Task Demand, *Wendy A. MacDonald and Errol R. Hoffmann* 735
The Effects of Various Design Alternatives on Moving-Base Driving Simulator Discomfort, *John G. Casali and Walter W. Wierwille* 743

AUTHOR INDEX

Agarwal, G. C. 497, 509
Allen, J. A. 189, 255
Anderson, N. S. 373, 388
Arnoult, M. D. 183, 254
Asfour, S. S. 257, 271, 385
Ayoub, M. M. 257, 271, 285, 385, 475, 509
Azar, N. 69, 123
Bakken, G. M. 271, 385
Ball, R. G. 569, 637
Barr, S. A. 177, 254
Baty, D. L. 605, 638
Bethea, N. J. 257, 271, 385
Bird, J. M. 581, 638
Bouma, H. 463, 508
Caelli, T. 721, 761
Caldeira, J. D. 119, 125
Carter, G. 141, 253
Casali, J. G. 743, 761
Chesney, G. L. 211, 255
Childs, J. M. 113, 125
Chiles, W. D. 445, 508
Clevenson, S. A. 291, 386
Cohen, A. 69, 123
Collins, W. E. 445, 508
Craig, A. 361, 388
Danaher, J. W. 535, 637
Dempsey, T. K. 291, 386
Dolliver, J. J. 103, 125
Donchin, E. 211, 256
Drucker, A. J. 131, 253
Drury, C. G. 201, 255, 707, 760
Dugan, J. 331, 387
Finkelman, J. M. 561, 637
Fleishman, E. A. 57, 122
Fowler, F. D. 645, 759
Fraser, M. 401, 507
Fudakowski, T. 655, 759
Garg, A. 475, 487, 509
Geiselman, R. E. 693, 760
Gershzohn, G. 621, 639
Gibson, C. P. 435, 508
Glaser, R. M. 177, 254
Gottlieb, G. L. 497, 509
Harris, D. H. 727, 761
Hart, S. G. 591, 638
Hayashi, Y. 3, 121
Herman, M. 417, 508
Hoffmann, E. R. 235, 241, 256, 735, 761
Hopkin, V. D. 547, 637
Hubbard, R. P. 171, 254
Iiyama, Y. 15, 121
Inukai, Y. 25, 121
Isreal, J. B. 211, 255
Jaeger, R. J. 497, 509
Jagacinski, R. J. 225, 256
Jago, S. J. 605, 638
Karwan, M. H. 707, 760
Kirschner, C. 561, 637
Kreifeldt, J. G. 671, 760
Kroemer, K. H. E. 389, 507
Kurabayashi, T. 37, 122
Laubach, L. L. 177, 254
Leatherwood, J. D. 291, 386
Levine, J. M. 57, 122
Lintern, G. 81, 123
Liuzzo, J. G. 201, 255
Loeb, M. 341, 388
Loomis, L. L. 591, 638
MacDonald, W. A. 241, 256, 735, 761
Mallamad, S. M. 57, 122
Marras, W. S. 389, 507
Mishima, I. 25, 122
Mital, A. 257, 271, 285, 385
Moran, M. S. 225, 256
Morawski, T. 707, 760
Morgan, B. B. 331, 387
Mourant, R. R. 417, 507
Moussa-Hamouda, E. 417, 508
Noble, M. 89, 124
Noro, K. 3, 43, 121
Noyes, L. 353, 388
O'Connor, S. L. 605, 639
Ogden, G. D. 373, 388
Ord, G. 569, 638
Oshima, M. 3, 121
Paine, T. G. 631, 639

Palmer, E. A.	605, 638	Stager, P.	631, 639, 655, 759
Payne, A.	235, 256	Stammers, R. B.	581, 638
Percival, L.	341, 387	Sturgis, S. P.	103, 125
Pilitsis, J.	153, 253	Suryaprasad, A. G.	177, 254
Porter, D.	721, 761	Swistak, J. E.	189, 255
Prescott, S.	235, 256	Triggs, T. J.	427, 508
Proulx, P.	655, 759	Trollip, S.	141, 253
Pulling, N. H.	103, 124	Uhlaner, J. E.	131, 253
Reid, L.	401, 507	Vaillancourt, D. R.	103, 125
Repperger, D. W.	225, 256	Van Nes, F. L.	463, 508
Reynolds, H. M.	171, 254	Voorhees, J. W.	183, 255
Rieck, A. M.	373, 388	Walsh, B.	655, 759
Saito, S.	25, 121	Ward, S. L.	225, 256
Salvendy, G.	153, 253	Whitfield, D.	569, 637
Samet, M. G.	693, 760	Wickens, C. D.	211, 255
Sanders, A. F.	89, 124	Wiener, E. L.	521, 637
Sanders, M. S.	313, 386	Wierwille, W. W.	743, 761
Sawka, M. N.	177, 254	Williams, D. H.	319, 387
Saxena, U.	487, 509	Winne, P. S.	331, 387
Simpson, C. A.	319, 386	Wolf, E.	103, 124
Smiley, A.	401, 507	Zohar, D.	69, 123

SUBJECT INDEX

Accidents: see also Safety
  aviation 521, 535, 645
Aging 103
Air Traffic Control 517, 521, 535, 547, 561, 569, 581, 591, 605, 621, 631, 645, 655, 671
Alcohol 445
Anthropometry 313
Attention
  cueing 319
Audition: see Noise
Auditory interference 183, 341
Auditory signals
  warning 319, 721
Automobile research: see Driver research
Aviation: see also Air Traffic Control
  accidents 521, 535, 645
  pilot workload 591, 605, 655, 671
  training 81
  visual display 435
Biomechanics 171, 257, 285, 475
Cognitive style
  perceptual tropism 427
Collision avoidance: see Air Traffic Control
Communication
  bilingual air traffic control 655
  message summarizing 693
Decision making: see also Information processing
  decision aids 57, 569, 693, 727
Display
  auditory 319
  visual 353, 435, 463, 581, 591, 605, 631, 671
Driver research
  control location 417
  highway signs 241
  intoxicated driver detection 727
  perceptual tropism 427
  simulator design 743
  steering behavior 401, 417, 427
Drugs
  alcohol 445, 727
Dual-task performance: see Secondary tasks
Education: see Training
Environment: see Noise
Evoked cortical potentials 211
Eye movements 43, 417
Feedback
  behavior modification 69
Fitts' Law 225
Handicapped
  wheelchair activity 177
Hearing: see Noise
Highways: see Driver research
Human information processing: see Information processing
Human factors research
  Japan 1, 3, 15, 25, 37, 43
Human performance
  fatigue 331
  intoxication and hangover 445
  measurement 113, 131, 547
  ncise 341
Individual differences
  age 103, 235
  sex 235, 257, 271, 285, 475
  work decrement 331
Information processing: see also Decision making
  air traffic control performance 561
Inspection
  blink inspection 201
  inspector judgment 25, 37
  multiple target 707
  optimal counting time 43
  signal detection 37
Job design
  job descriptions 57
  lifting 257, 271, 285, 475, 487
Legibility
  segmented numeral 463
Manual control: see also Tracking
  alcohol effect 445
  compensatory display 497
  motor skills 225

pursuit display 497
Mathematical programming 141
Memory
short term 241
Methodology
distress signals 389
job description 57
man-machine matching 15
ride discomfort 291
training 141, 153
Military human factors 131, 693
Models
predictive 257
systems 15
vector 25
Monitoring: see Vigilance
Motor skills: see Manual control and Tracking
Multiple task performance battery 445
Noise
aircraft 183
effect on performance 341
hearing loss 69
localization 721
Numerals
segmented 463
Perceptual tropism 427
Personnel selection 57
Physiological measures
lifting 257, 271, 285, 475, 487
stress 177
Politics 521
Psychomotor skills: see Tracking and Manual control
Psychophysical judgments
tactile 25
weight 257, 271, 285, 475, 487
Quality assurance: see Inspection
Reaction time 235
Safety: see also Air traffic control and Accidents
distress signals 389
lifting 475
Scanning: see Visual search
Schema theory 693
Secondary tasks 89, 211, 373, 417
Selection: see Personnel
Sex differences
distance estimation 235
lifting 257, 271, 285, 475
Signal detection 37, 119
Signals
distress 389
warning 319, 721
Simulation training
aircraft 81
medical suturing 153
driving similator design 743
Steering behavior: see Driver research
Stress
air traffic control 561
physiological 177
Systems design 15, 621
Tactile information 25
Tracking: see also Manual control and Motor skills
compensatory 89, 497
dynamic 445
Fitts' law 225
predictor operator 497
pursuit 497
steering 401
static 445
training 373
Training
aviation 81
medical suturing 153
methods 141
tracking tasks 373
Vigilance 361
Vision
age 103
glare resistance 103
ocular dominance 189
Visual search
inspection 25, 37, 43, 201, 707
map word clarity 353
traffic signals 89
Workload: see also Air traffic control
lifting 257, 271, 285, 475, 487